

The present invention provides for globally aligning microelectronic circuit systems, such as communication devices and chips, fabricated on or bonded to the front and back sides of one or more substrates to provide for wireless communications between the circuit systems through the one or more substrates. In one embodiment, two circuit systems situated on opposite sides of a substrate are aligned to provide for wireless communications between the two circuit systems through the substrate. In another embodiment, communication devices situated on one or more substrates are aligned to provide for wireless communications between the communication devices through the one or more substrates. In another embodiment, two chips situated on opposite sides of a transparent substrate are aligned to provide for wireless communications between the two chips through the transparent substrate.